Volume Title: NBER International Seminar on Macroeconomics 2005

Volume Author/Editor: Jeffrey Frankel and Christopher Pissarides, editors

Volume Publisher: MIT Press

Volume ISBN: 0-262-06265-8, 978-0-262-06265-7

Volume URL: http://www.nber.org/books/fran07-1

Conference Date: June 17-18, 2005

Publication Date: May 2007

Chapter Title: Comment on "The Roots of Low European Employment: Family Culture?"

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Chapter URL: http://www.nber.org/chapters/c0345

Chapter pages in book: (115 - 123)

Comment

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1. Introduction

This paper offers a new interpretation of the patterns of European employment rates over the last 30 years that is based on the crucial role of the family. It presents some interesting evidence on the evolution of the employment rates of the different demographic groups and develops a model based on the interaction between technology and family preferences that is able to capture the main features of the data.

While the employment rate of prime age males decreased slightly everywhere and that of prime age females rose in all European countries, the dynamics of the employment rates of younger and older individuals were very different across countries: these rates remained quite stable in Anglo-Saxon and Scandinavian countries while they dramatically decreased in Continental and Mediterranean countries.

The authors explain this phenomenon by means of a model in which a common shock, the decline in the price of durables, interacts with cross country heterogeneity in family preferences. In this original framework, the decision making unit is the family, which derives utility not only from consumption of a market good and from female and male leisure, but also from a different activity, called family activity, which requires as inputs a household good and family members' time. The most intuitive example of family activity is a family dinner, which requires the presence of a meal to consume and some time of each member of the family to consume it. Meals are produced using female housework and appliances. A key assumption is that, while the meal and family members' time are complements in the production of the family dinner, female time and appliances are substitutes in the production of the meal. It follows that, as the price of appliances drops, women devote less time to housework (so their labor supply

in the market increases) but also more meals are produced. Because meals and family members' time are complements in the production of the family dinner, old and young members of the family will increase the time spent around the family table and consequently decrease their labor supply on the market. This effect will be stronger the larger the weight on the family activity in the family's utility function.

In the empirical section of the paper, the authors provide three types of evidence in support of their story. They first show that an individual's attitudes toward gender roles, as well as an individual's attitudes toward the proper role of young and old people in the economy, are significantly affected by the country of residence, after controlling for several individual characteristics. They then provide evidence that this cross-country heterogeneity in attitudes are significant in explaining differences across countries in the employment rates of different demographic groups, after controlling for labor market institutions. So, for example, the country fixed effects estimated in the individual regression of attitudes toward gender roles are significant in explaining cross-country differences in the employment rates of prime age women, while the country fixed effects estimated in the regression of attitudes toward youth independence are significant in explaining differences in youth employment rates, after controlling for several labor market institutions. The last piece of evidence concerns the relationship between the decline in the price of household durables and the dynamic evolution of employment rates. The theoretical model predicts that a decline in the price of household goods should induce old and young people to devote more time to family activities, and therefore to a reduction in their employment rates. This effect is expected to be larger the stronger the preferences for family activities. In the data the correlation over time between employment rates of young and old people and price of household durables is positive and significant for Mediterranean and Continental countries, while is negative and insignificant for Anglo-Saxon and Scandinavian counties. The authors interpret these results as evidence that the same technological shock has induced very different employment rate dynamics among young and old people in different European countries depending on the national attitudes toward family relations.

The assumption that individuals in different countries are endowed with different preferences over the family good is crucial to the story and I will explore its implications in this comment. In particular, the kind of preference heterogeneity the authors assume in their model

delivers implications for the patterns of expenditures across countries and for the relationship between female and youth employment rates. These implications are discussed in the following section. Next, I discuss the empirical evidence presented in the paper and make some comments on the link between theoretical model and data.

1.1. *Preferences for the Family Good: Implications from the Theory*

The model developed in this paper has an important implication for the share of expenditures on household appliances across countries.

The model predicts that a decrease in the price of household appliances implies an increase in women's labor force participation rates together with a decline in the employment rates of young and old people, these effects being larger in magnitude for countries with stronger preferences for the family good. However, given the price of the household appliances, the model also delivers implications for how families that only differ in their preference over the family activity, allocate their expenditures among different goods. In the model families purchase on the market two types of goods: a numeraire consumption good c, and the household appliance k at the price p, used in the production of the family activity. The first order conditions imply:

$$\frac{c}{pk+c}=\frac{1}{q\left(\frac{1-\eta}{p}\right)\frac{\varphi}{z}p} \tag{1}$$

where the left hand side in (1) is the share of total expenditures that goes in the consumption of the market good. Given the unit price of the household good, q, the unit price of the family activity, z, and the price of the household good, which are the same across countries, the way families allocate their expenditures between market good and household appliances depends on the preference parameter φ, which captures cross country heterogeneity in families' taste for the family activity. In particular, since household appliances are used in the production of the family activity, the stronger the preference for the family activity, the larger the expenditure share in household appliances.

Given the difference in the preference parameter φ assumed in the paper, the model generates large differences in the share of expenditures in household appliances. Assuming, as the authors do, that the price of household appliances has declined uniformly across European

countries at a rate of about 1 percent a year, Figure 1 plots the implied evolution of the expenditure share in household appliances for Mediterranean countries ($\varphi = 0.5$) and Anglo-Saxon countries ($\varphi = 0.1$) starting in 1975 with the price normalized to 1 and letting the price drop to 0.6. For these parameter values, the model predicts a share of expenditures in household appliances for Mediterranean countries well above 30 percent for all values of the price, and a share for Anglo-Saxon countries between 5 and 7 percent.

Is this implication in accordance with the empirical evidence?

Eurostat has data on the overall structure of consumption expenditure for most European countries by detailed COICOP level. These data are based on household budget surveys, conducted in different countries in 1988, 1994, and 1999. The countries identified as Mediterranean in the empirical section of the paper are Italy and Spain, while the Anglo-Saxon ones correspond to United Kingdom and United States. Accordingly, Figure 1 reports, together with the prediction of the model, data on the average expenditure shares in "Furnishings, household equip-

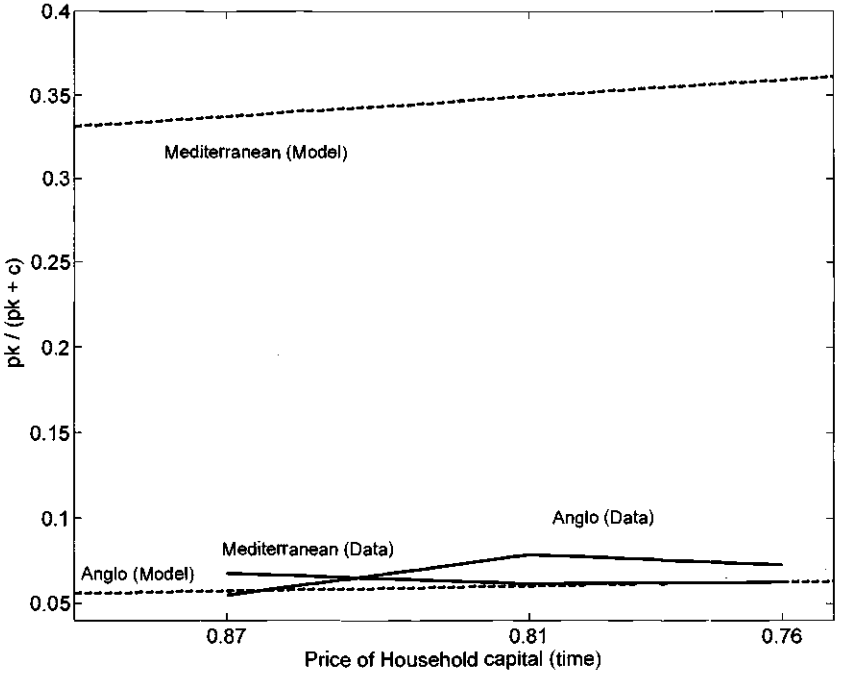


Figure 1
Expenditure shares in household appliances

ment and routine maintenance of the house" for Italy and Spain against that of United Kingdom for the years in which the data are available, which correspond, given the assumption of a drop in price of 1 percent a year starting in 1975 with the price normalized to 1, to a price of 0.87, 0.81, and 0.76. This category of expenditures includes "Household Appliances" together with other types of expenditures such as household textiles, tools and equipment for the house and garden, etc. In Italy the share of expenditures in this broad category was around 7 percent over the entire period while the share of expenditures in "Household Appliances" alone has never reached 1 percent. Similarly in Spain, the expenditure share in the broader category has never even reached 6 percent, with no more that 0.9 percent spent in household appliances. Therefore, the implied expenditure shares in household appliances seem to be way too large for Mediterranean countries, even when we consider the broader definition.

However, the more problematic assumption is not the level of φ for the Mediterranean countries, but rather the difference in the value of φ between Mediterranean and Anglo-Saxon countries.

If we look at the United Kingdom, the average expenditure share in the broader category of household goods is about 7 percent over the period, with the portion spent in household appliances equal to about 1.1 percent. These shares are remarkably similar to those observed for Mediterranean countries.

Given this evidence, the data seem to suggest that any difference in the parameter φ should be negligible, so that a theory based on differences across countries in the taste for household goods will never deliver differences across countries in employment rates which are quantitatively relevant.

The model also delivers predictions on the relationship between female and youth employment rates. Countries where the employment rates of young people drop the most are the countries where female employment rates increase the most, and are those characterized by strong preferences for the family activity (left panel, Figure 2). The opposite should be true for countries with weak preferences over the family good (right panel, Figure 2).

However, in the data presented by the authors and reproduced in Figure 3, the series for the female employment rate in Continental countries (strong preferences for family good) displays identical behavior to that of the Anglo-Saxon countries (weak preferences for family good), while the series for the youth employment rates are very different, with

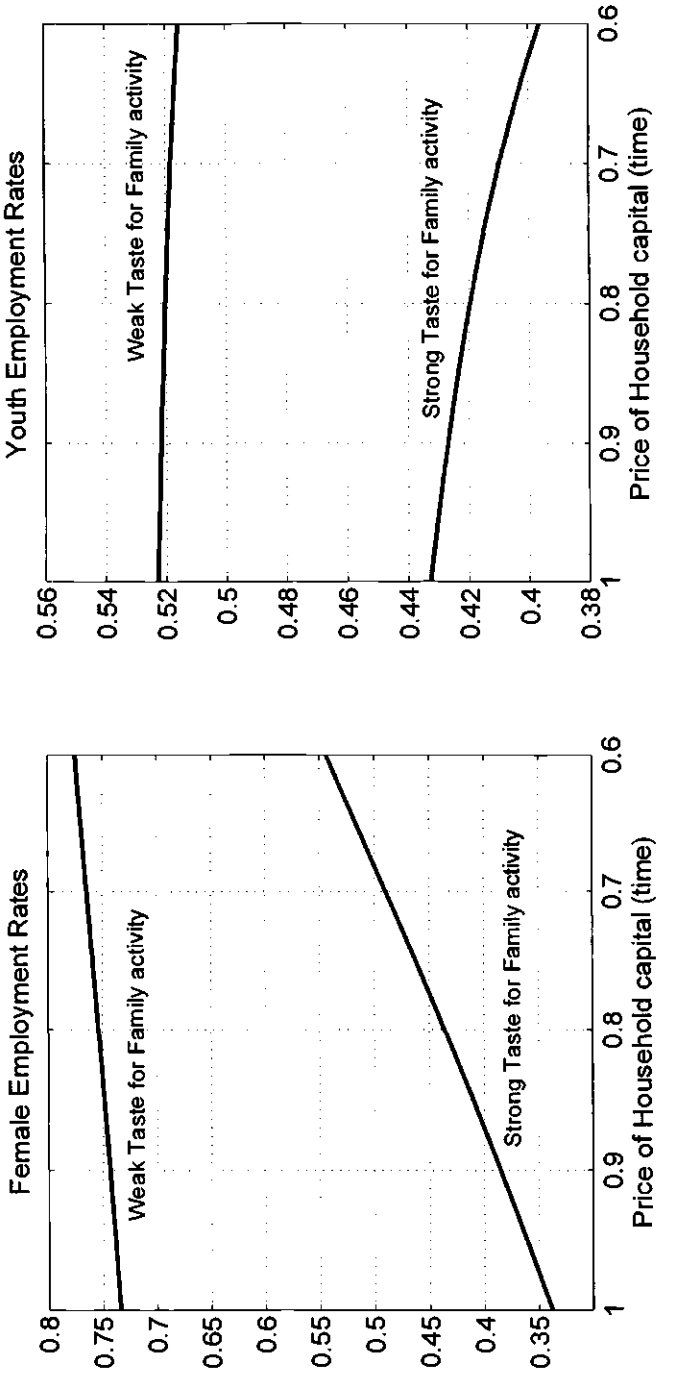
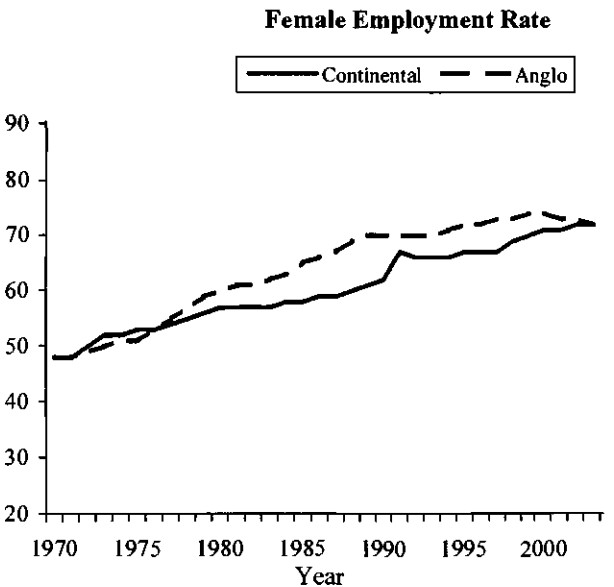


Figure 2
Female and youth employment rates



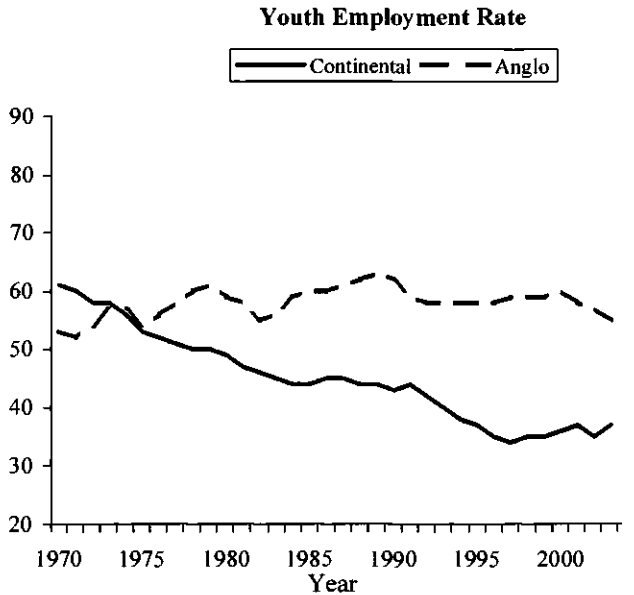


Figure 3
Youth and female employment rates

the one in Continental countries strongly decreasing and that in Anglo-Saxon countries pretty much constant over the period.

This evidence suggests that differences in family activities might not be very large, and even if they were they could not explain, for example, the observed differences in youth employment rates between Continental Europe and Anglo-Saxon countries.

1.2. *Preferences for the Family Good: The Empirical Evidence*

In the empirical section of the paper, the authors show that country fixed effects are significant in explaining differences across individuals in attitudes toward gender roles, living arrangements and role in society of young and old individuals. However, in the model, the authors assume away all these differences and consider an environment in which the household good can only be produced using female time, while no direct or indirect evidence is produced on the assumed cross-country differences in preferences for the family good.

Also, the authors show that these differences matter to explain cross country differences in employment rates. However, somewhat surprisingly, they do not include in their analysis some obvious variables that are directly related to youth and senior employment and largely differ across countries, like differences in school systems, school to work programs, part time work, flexible contracts for young individuals and pension and tax systems for old ones.

Finally, the evidence on the differential impact of a decline in the price of durables on the employment rates of different countries is suggestive but not convincing: while it is true that A causes B in the model, i.e., that a decline in the price of durables affects employment rates only in countries with strong preferences over the family good, there are many reasons why this may be the case which have nothing to do with the particular story told in this paper. In other words, the empirical evidence presented in the paper is too reduced form to be considered convincing and alternative hypothesis need to be explored.

2. Conclusion

This provocative paper suggests that the employment rate of young people in Mediterranean countries has dramatically fallen over the last few decades because individuals in these countries have strong preferences for family activities and optimally chose to spend more time

around the dinner table after a drop in the price of household appliances made family meals cheaper and more readily available. The evidence presented in this comment suggests that this is probably not the whole story, and that likely other factors are important to explain employment patterns in Southern Europe. Yet this paper raises some important issues: to understand the evolution of the employment rates of different demographic groups it is necessary to analyze them jointly and in such analysis the family should have a primary role.

This paper also makes another important point: a theory based on purely technological differences across countries would have a hard time in explaining the large amount of heterogeneity observed in employment rates across European countries. In this respect, it is important to explore the role played by differences in preferences.